

WHAT IS CLAIMED IS:

1. A print controller for controlling an image print unit to print an index image on a recording medium to be used for separation when a printed record medium is recycled, comprising:

5 an output unit that outputs image data representing an image to be printed on the record medium to the image print unit; and

an index unit that determines the index image to be printed on the record medium together with the image by the image print
10 unit based on a printing condition.

2. The print controller according to claim 1,
wherein the printing condition is determined based on at least one of the image data and type of the record medium.

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3. The print controller as claimed in claim 1, further comprising: an index print unit that produces image data representing the index image.

20 4. The print controller as claimed in claim 3,
wherein the index print unit causes the output unit to output the image data so as to include the image data representing the index image.

25 5. The print controller as claimed in claim 1,

wherein the index unit includes a print ratio calculation unit that calculates the occupation ratio of the image to the record medium on which the image is printed as a print ratio; and

5 the index unit determines the index image based on the print ratio.

6. The print controller as claimed in claim 5,
 wherein the print ratio calculation unit calculates the
10 print ratio based on the number of pixels of the image to be printed.

7. The print controller as claimed in claim 5,
 wherein the print ratio represents the ratio of the area
15 of the image to the area of both sides of the record medium on which the image is to be printed.

8. The print controller as claimed in claim 5,
 wherein the index unit determines a group name for the
20 separation and determines the index image so as to represent the group name.

9. The print controller as claimed in claim 8,
 wherein the index decision unit determines the group name
25 based on color of the image.

10. The print controller as claimed in claim 1, further comprising:

5 a medium judgement unit that judges a type of the record medium;

wherein the index unit determines the index image based on the type of record medium.

11. The print controller as claimed in claim 10,

10 wherein the medium judgement unit judges the type of the record medium based on an entry operation.

12. The print controller as claimed in claim 10,

15 wherein the index decision unit determines a group name for the separation based on the type of the record medium and determines the index image so as to represent the group name.

13. The print controller as claimed in claim 1,

20 wherein the index decision unit determines a group name for the separation and determines the index image so as to represent the group name; and

the index unit changes a criterion for determining the group name based on entry operation.

25 14. The print controller as claimed in claim 1,

wherein the index image includes a bar code representing an index indication description thereof.

15. The print controller as claimed in claim 5,
5 wherein the index image includes the print ratio.

16. The print controller as claimed in claim 3,
wherein the index print unit causes the image print unit to print the index image on the same side of the record medium
10 as the image.

17. The print controller as claimed in claims 1, further comprising an inhibition unit that inhibits an operation of the index print unit based on entry operation.

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18. The print controller as claimed in claims 1,
wherein the index unit decides the index image based on color of the image.

20 19. The print controller as claimed in claims 1,
wherein the index unit decides the index image based on a size of the recording medium.

20. The print controller as claimed in claims 1,
25 wherein the index unit decides the index image based on

a content of the image.

21. An image forming apparatus comprising:

an image print unit that prints an image on the record
5 medium;

a printer controller;

wherein the printer controller includes an output unit
that outputs image data representing the image to the image
print unit, and an index unit that decides an index image to
10 be used as an index of separation for recycling the record medium,
the index image to be printed on the record medium by the image
print unit.

22. The image forming apparatus as claimed in claim 21, further
15 comprising a scanner to scan an image from a recording medium
from an original; and

a data producing unit that produces the image data based
on the scanned image;

wherein the output unit outputs the image data produced
20 by the data producing unit.

23. The image forming apparatus as claimed in claim 21, wherein
the image forming apparatus is capable of receiving data from
an external data sending apparatus;

25 the image forming apparatus further comprising a data

receiving unit that receives data; and

a data producing unit that produces the image data based on the received data;

wherein the output unit outputs the image data produced
5 by the data producing unit.

24. A program product for causing a computer to function as:

print ratio calculation means for calculating the occupation ratio of an image to be printed on a record medium
10 to the record medium as a print ratio; and

index print means for determining an index image used as an index of separation for recycling the record medium based on the print ratio calculated by the print ratio calculation means and performing processing to print the index image on
15 the record medium.

25. A program product for causing a computer to function as:

medium determination means for determining the type of record medium on which an image to be printed is printed; and

20 index print means for determining an index image used as an index of separation for recycling the record medium based on the type of record medium determined by the medium determination means and performing processing to print the index image on the record medium.

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26. An automatic separation apparatus, comprising:
a paper receiving unit that receives a recording medium;
a reading unit that reads an index of separation for
recycling the record medium which is printed on the recording
5 medium; and
a separation unit that automatically separates the
recording medium according to the read index.

27. A controller for an image forming apparatus to form an
10 image on a recording medium, comprising:

an output unit that outputs image data representing the
image to be formed on the recording medium to the image forming
apparatus;

a print ratio calculating unit that calculates the
15 occupation ratio of the image to the recording medium on which
the image is printed; and

an additional image selecting unit that selects a first
image to be additionally formed on the recording medium together
with the image when the occupation ratio is higher than a
20 predetermined value and selects a second image to be additionally
formed on the recording medium together with the image when
the occupation ratio is equal to the predetermined value or
lower than the predetermined value.

25 28. A controller for an image forming apparatus to form an

image on a recording medium, comprising:

an output unit that outputs image data representing the image to be on the recording medium to the image forming apparatus;

5 a medium judging unit that judges the type of the recording medium; and

an additional image selecting unit that selects a first image to be additionally formed on the recording medium together with the image when the judged type of recording medium falls
10 under a predetermined category and selects a second image to be additionally formed on the recording medium together with the image when the judged type of recording medium is out of the predetermined category.

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